



Borderlands Jaguar Detection Project

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Annual Progress Report 2008

In cooperation with the Arizona-New Mexico Jaguar Conservation Team, the Arizona Game and Fish Department, and the Integral Ecology Research Center.

The purpose of this report is to update the Arizona-New Mexico Jaguar Conservation Team (JAGCT), its signatory agencies and active members, as well as our many other important collaborative conservation partners, on the current research results, education and outreach activities and general progress from the Borderlands Jaguar Detection Project. This report is one of a series of progress reports that the Borderlands Jaguar Detection Project (BJDP) will continue to present to the JAGCT at future working group meetings on a quarterly or biannual basis. **This report and all information contained herein are exclusive property of Emil B. McCain and Jack L. Childs and must be referenced as follows:**

McCain, E. B. and J. L. Childs 2008. Borderlands Jaguar Detection Project – Annual Progress Report 2008. Arizona-New Mexico Jaguar Conservation Team. Buenos Aires National Wildlife Refuge. February, 2009.

Note: *Location names and exact coordinates are withheld as requested by the Arizona Game and Fish Department and the United States Fish and Wildlife Service for the safety of the animals and their habitats.*

The Borderlands Jaguar Detection Project (BJDP), an affiliate of the 501(c)(3) non-profit Integral Ecology Research Center, is a grassroots organization dedicated to the collaborative conservation of the jaguar at the northern extent of its range in Arizona. The project was founded in 2001 by lifelong Arizona outdoorsman, renowned tracker and wildlife author, Jack Childs and his wife Anna Mary, after a life-changing face-to-face encounter with a wild Arizona jaguar. The project was then expanded upon by wildlife biologist Emil McCain, local tracker Janay Brun, and various local volunteers. We focus on gathering current information on jaguar status and distribution in the state through traditional tracking methods and modern scientific techniques. Our education and outreach program strives to engage our diverse conservation collaborators - from local landowners and communities to the international scientific community to county, state, federal and international government agencies - in sustainable conservation of the jaguar, its habitat and the human communities within its range.

The objectives of BJDP are to assess the current status and distribution of jaguars in southern Arizona and to obtain baseline information on habitat utilization, spatial requirements, and travel corridors (including cross-border movements). As the only research project to assess current jaguar status and conservation needs within the United States, one of our primary roles has been to guide the adaptive management actions of the integrative Arizona-New Mexico Jaguar Conservation Team (JAGCT), a group of local, state, and federal land and wildlife management agencies which have been tasked with the conservation and recovery of the jaguar in the U.S.

Field Research

During 2008 BJDP maintained continuous camera monitoring at approximately 45-50 camera stations in Pima, Santa Cruz and Cochise Counties of Arizona. The number of cameras active at any one time varied slightly due to vandalism and camera malfunction. We also conducted track and scat surveys opportunistically during activities within potential jaguar habitat, such as hiking to service cameras, following up on sighting reports, and exploring new areas. In the last year, we obtained six new jaguar

photographs and documented two sets of jaguar tracks. So far no jaguar DNA has been isolated from the scat samples submitted to the genetics lab at the University of Arizona. To date, the project has produced 85 jaguar photographs - representing 74 photographic data points (10 photographs were duplicate images from paired cameras), and 31 sets of jaguar tracks in Arizona (105 total locations). These data represent two adult male jaguars and possibly third unknown, unsexed jaguar. (See McCain and Childs 2008 Journal of Mammalogy article for more information.)

Perhaps the most photographed and widely-known wild jaguar ever was recently caught on film again in southern Arizona. After more than one year since the last photograph of a jaguar was taken in the U.S., the jaguar commonly known as Macho B, has again passed in front of the trail cameras monitored by the BJDP. Macho B was first photographed as a young adult (≥ 2 -3 years old) in August 1996 by hunters Jack Childs and Matt Colvin (Childs 1998). He has since been photographed dozens of times by the Borderlands Jaguar Detection Project's camera monitoring effort along the U.S./Mexico border between 2004 and 2007 (McCain and Childs 2008). After more than one year with no new photographs, it became widely assumed that Macho B was no longer with us. Many believed that he had either died of old age, been killed or had been physically kept out of the U.S. study area by the various border security infrastructures. Macho B has once again surprised us all.

At dawn on 29 July 2008, Macho B passed by a camera hidden in a remote canyon some 20 miles from the US/Mexico border. He was traveling to the south. Four days later, on 2 August 2008, and nine miles further south, Macho B passed by another one of our trail cameras. Thick and robust in the photographs, he appeared healthy and in good shape. He then reappeared in the same area in January 2009, as well as areas further to the south, once only a couple hundred meters from the border fence.

With photographs of this Arizona jaguar spanning from 1996 to 2009, Macho B has provided us with the longest running dataset on any wild, free-ranging jaguar that we are aware of. He was at least 15 years old when the most recent photograph was taken on January 21, 2009. From this long-term dataset, along with several scent-marking behaviors, we have determined that this individual is a resident, with at least a large portion of his home range within the state of Arizona (McCain and Childs 2008). Many have questioned this conclusion; however, we return the question: if this animal is not a resident of Arizona, just where exactly is he a resident?

Sighting Report Investigations

The BJDP currently serves as the primary information gathering vehicle for the JAGCT, especially regarding field research. One portion of that work is investigating various jaguar sightings that are reported to the JAGCT, AZGFD, or our project directly. During 2008 we conducted follow-up field investigations and interviews on the following sighting reports:

Black cat sighting – Dragoon Mts
Two jaguars together – Robles Junction
Border Patrol/Forest Service Law Enforcement - Nogales
Black cat – Arivaca
Jaguar chasing cows – Sasabe
Ocelot with kitten in palm tree – Kino Springs
Catalina mts. photo hoax – Tucson
Black cat photograph – Datil, NM

BJDP Partnerships

All work, including materials and photographs, being conducted by the Borderlands Jaguar Detection Project is a component the *Jaguar Conservation Assessment and Framework for Arizona, New Mexico and northern Mexico*, hereafter "Framework," for the Jaguar Conservation Team of which the Arizona Game and Fish Department is a member by execution of a Memorandum of Understanding on March 22, 2007. This is a collaborative conservation program among the Arizona Game and Fish Department and various governmental and nongovernmental partners, including the Borderlands Jaguar Detection Project.

In 2008 BJD P has worked hard to develop, reconnect and maintain unique partnerships and working relationships with the following new collaborative conservation partners:

New Partners

Bar Boot Ranch
Conez Brothers Cattle Company
The Cougar Network
Elkhorn Guest Ranch
Furman University
The Gathering Grounds
Landscape connectivity for large carnivores in the Arizona-Sonora Sky Islands – *Research Project*
Collaborators: USDA APHIS, AZGFD, WCS, BJD P, UofA, NMSU, Southern Illinois University
Life Lince (Spain)
Marley Cattle Company
Nature Conservancy – Sonoita Creek Preserve
North Star Science and Technology, LLC
Pima County
Phoenix Zoo
Prescott College
Primeros Conservation Outfitters (Mexico)
Programa de Conservación Ex-Situ Lince Ibérico (Spain)
Save the Senic Santa Ritas
Sierra Vista District – Coronado National Forest
Sierra Vista Ranch
SOS Conservation (Mexico)
Rio Nuevo Publishers
University of Arizona – Independent Study Project

Continuing Partners

Altar Valley Conservation Alliance	Appleton-Whittell Research Ranch
Arizona Game and Fish Department	Arizona Game & Fish Dept. Heritage Fund
Arizona Sonora Desert Museum	Arizona State Land Department
Baboquiviri Ranch	Bear Valley Cooperative
Borderlands Carnivore Studies - Dr. Christine Hass	Buenos Aires Wildlife Refuge
Bureau of Land Management	The Colorado College
Estudia Fotografica Silvestre	Graham Bell Gallery
Humboldt State University	Integral Ecology Research Center
Keeping Track Inc.	King's Anvil Ranch
Malpai Borderlands Group	MGW Biological Surveys
New Mexico Department of Game and Fish	Redwood Sciences Laboratory
Reid Park Zoo	Ruby Mines
Safari Club International	Seabyrd Technologies
S.P.E.C.I.E.S.	Switzer Environmental Foundation
United States Border Patrol/DHS	USDA-APHIS- Wildlife Services
United States Fish and Wildlife Service	United States Forest Service
University of Arizona School of Natural Resources	Woodland Park Zoo
ZZ Cattle Company	

Project Volunteers

Steve Bless – Tucson, AZ	Brett Blum – U. of A. Tucson, AZ
Glen (Gooch) Goodwin – Patagonia, AZ	Jennifer Feltner – Tucson, AZ
Claribel Leon Rodriguez – Sevilla, Spain	Jim McCain – Gardner, CO
Monica Morrison – Dallas, TX	Susan Morse – Wolf Run, VT
Peter Ragan – Arivaca, AZ	Daniel Roe – Douglas, AZ
Keith Shallcross – Douglas, AZ	Michael (Sundog) Sardinia – Ruby, AZ
Martin Trujillo – Tucson, AZ	Thad Williams – Los Angeles, CA

Education and public outreach

While the primary aim of the BJDIP is to conserve the northernmost jaguars in southern Arizona, we emphasize that people are an essential piece of preserving any species and its habitat. Therefore we are committed to educating and engaging the public and a diverse group of stakeholders, conservation advocates and agency managers. The information we gather through fieldwork is incorporated into presentations and lectures given to agency managers, local communities, organizations, universities and school groups throughout southern Arizona, as well as nationally and internationally. We present our latest findings and progress at the quarterly meetings of the multi-agency JAGCT. We also work closely with multiple media sources that disseminate our work on local, state, national and international levels. On the local scale, our education and outreach program empowers and educates the local community about the jaguar's presence and its importance as a top keystone predator in the fragile desert ecosystem. Educating the public about the presence of something as wild, powerful and mysterious as the jaguar can inspire learning more about the natural environment and how we as humans can live more responsibly on this planet. We also work closely with the ranching community within jaguar habitat to alleviate their concerns and problems surrounding this large carnivore and to bring these stewards of the land on board as conservation collaborators. At BJDIP we believe that proud stewards of the land provide a safe and healthy environment for this endangered species and that they should be able to view the presence of such an animal as an asset rather than a liability.

BJDIP Presentations/Workshops for 2008

<u>Date</u>	<u>Event – Location</u>
01/03/08	The Gathering Grounds Photography Exhibition – Patagonia, AZ
01/08/08	Malpai Borderlands Group Science Meeting – Douglas, AZ
01/14/08	Prescott College Mammalogy class – Buenos Aires NWR
01/25/08	Casa de Esperanza – Green Valley, AZ
02/22/08	The Cougar Network -2nd Cougar Field Workshop - Turner's Ladder Ranch, NM.
02/25/08	Rueter's TV interview – Mt. Whipple, AZ
03/26/08	Spanish Interns from Iberian Lynx Project - Patagonia, AZ
03/29/08	Arivaca Film Festival (Janay Brun) - Arivaca, AZ
04/07/08	CNN TV interview – Mt. Whipple, AZ
04/15/08	Sopri School 1 st grade class – Amado, AZ
04/24/08	Tucson Basin Meeting – Tucson, AZ
06/10/08	Junta de Andalucia,.State Dept of Andalucia – Sevilla, Spain
09/22/08	Whidbey Island Conservation Club Freeland, WA
09/27/08	Switzer Environmental Foundation Fall Retreat – San Francisco, CA
10/16/08	University of Arizona, Mammals management class
10/17/08	Tucson, AZ
10/31/08	BBC TV Interview - Pajarito Mountains, AZ
11/06/08	Phoenix Zoo
11/07/08	Arizona State University - School of Life Sciences- Phoenix, AZ
11/15/08	Friends of the Buenos Aires National Wildlife Refuge annual meeting – Sasabe, AZ
12/27/08	Western National Parks Book Store - Oro Valley, Arizona
01/08/08	Arivaca Community Center/Sierra Club - Arivaca, AZ
01/09/09	Summit Hut Lecture Series – Tucson, AZ
01/15/09	Wings Over Wilcox - Wilcox, AZ
01/25/08	Prescott College/SOS Conservation – Patagonia, AZ
02/11/09	Elk Horn Guest Ranch – Tucson, AZ
02/17/09	Saguaro National Park East – Tucson, AZ

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